L26: Entry 1 of 1 File: USPT Sep 7, 1999

US-PAT-NO: 5950173
DOCUMENT-IDENTIFIER: US 5950173 A

TITLE: System and method for delivering consumer product related information to consumers within retail environments using internet-based information servers and sales agents

DATE-ISSUED: September 7, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
IPF, Inc.	Darien	CT			02

APPL-NO: 08/ 854877 [PALM]
DATE FILED: May 12, 1997

PARENT-CASE:
RELATED CASES This is a Continuation-in-Part of copending application Ser. No. 08/826,120 entitled "System And Method For Collecting Consumer Product Related Information And Transmitting And Delivering The Same Along The Retail Supply And Demand Chain Using The Internet" filed Mar. 27, 1997, which is a Continuation of Ser. No. 08/752,136 entitled "System And Method For Finding Product and Service Related Information On The Internet" filed Nov. 19, 1996; which is a Continuation-in-Part of copending application Ser. No. 08/736,798 entitled "System And Method For Finding Product and Service Related Information On The Internet" filed on Oct. 25, 1996; each said Application being incorporated herein by reference in its entirety as if set forth fully herein.

INT-CL: [06] G06 F 17/60, G06 F 17/00

US-CL-ISSUED: 705/26; 705/27, 235/375, 395/200.49, 379/93.12
US-CL-CURRENT: 705/26; 235/375, 379/93.12, 705/27, 709/219

FIELD-OF-SEARCH: 705/1, 705/16, 705/17, 705/21, 705/26, 705/27, 235/375, 235/376, 235/385, 235/454, 235/462, 395/200.31, 395/200.33, 395/200.47, 395/200.49, 379/93.12

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4654482	March 1987	DeAngelis	379/93.12
☐	5640193	June 1997	Wellner	348/7

ART-UNIT: 271

PRIMARY-EXAMINER: Tkacs; Stephen R.

ATTY-AGENT-FIRM: Perkowski, Esq., P.C.; Thomas J.

ABSTRACT:

A system and method are disclosed for finding and serving consumer product-related information over the Internet to consumers in retail shopping environments, as well as at home and work, and on the road. The system includes Internet information servers which store information pertaining to Universal Product Number (e.g. UPC number) preassigned to each consumer product registered with the system, along with a list of Uniform Resource Locators (URLs) that point to the location of one or more information resources on the Internet, e.g. World Wide Web-sites, which related to such registered consumer products. Upon entering the UPC number into the system using a conventional Internet browser program running on any computing platform or system, the menu of URLs associated with the entered UPC number is automatically displayed for user selection. The displayed menus of URLs are categorically arranged according to specific types of product information such as, for example: product specifications and operation manuals; product wholesalers and retailers; product advertisements and promotions; product endorsements; product updates and reviews; product warranty/servicing; related or complementary products; product incentives including rebates, discounts and/or coupons; manufacturer's annual report and 10K information; electronic stock purchase; etc. Web-based techniques are disclosed for collecting the UPC/URL information from manufacturers and transmitting the same to the Internet-based databases of the system.

7 Claims, 18 Drawing figures

L26: Entry 1 of 1 File: USPT Sep 7, 1999

DOCUMENT-IDENTIFIER: US 5950173 A
TITLE: System and method for delivering consumer product related information to consumers within retail environments using internet-based information servers and sales agents

Brief Summary Text (11):
In recent times, there has been a number of significant developments in connection with the global information network called the "Internet", which has greatly influenced many companies to create multimedia Internet Web-sites in order to advertise, sell and maintain their products and services. Examples of such developments include, for example: the World Wide Web (WWW) based on the Hypertext Markup Language (HTML) and the Hypertext Transmission Protocol (HTTP) by Tim Berners-Lee, et al.; easy to use GUI-based Internet navigation tools, such as the Netscape.RTM. browser from Netscape Communications, Inc., the Internet Explorer.TM. browser from MicroSoft Corporation and the Mosaic.TM. browser from Spyglass Corporation; and the Virtual Reality Modelling Language (VRML) by Mark Pecse. Such developments in recent times have made it very easy for businesses to create 2-D Hypermedia-based Home Pages and 3-D VR Worlds (i.e. 3-D Web-sites) for the purpose of projecting a desired "corporate image" and providing a backdrop for financial investment solicitation as well as product advertising, sales and maintenance operations.

Brief Summary Text (18):
While the NIIT's Universal Product and Service Code Project seeks ways of locating specific goods and services on the Internet, all proposals therefor recommend the development of formalized coding standards and searching and browsing methods which are expensive and difficult to develop and implement on a world-wide basis. Moreover, such sought after methods will be virtually useless to consumers who have already purchased products and now seek product related information on the Internet.

Brief Summary Text (27):
Another object of the present invention is to provide such a system, wherein the manufacturers of consumer-products are linked to the retailers thereof in the middle of the supply and demand chain by allowing either trading partner to access consumer-product information from the Internet-based product information database virtually 24 hours a day, seven days a week.

Brief Summary Text (28):
Another object of the present invention is to provide such a system, wherein consumer-product manufacturers, their advertisers, distributors and retailers are linked to the consumers of such products at the end of the supply and demand chain, by allowing such parties to access consumer-product information from the Internet-based product information database subsystem virtually 24 hours a day, seven days a week.

Brief Summary Text (31):
Another object of the present invention is to provide such a system and method,

wherein virtually any type of product can be registered with the system by symbolically linking or relating (i) its preassigned Universal Product Number (e.g. UPC or EAN number) or at least the Manufacture Identification Number (MIN) portion thereof with (ii) the Uniform Resource Locators (URLs) of one or more information resources on the Internet (e.g. the home page of the manufacturer's Web-site) related to such products.

Brief Summary Text (44):
Another object of the present invention is to provide "virtual sales agents" with retail shopping environments by installing the computer-based kiosks of the present invention therein.

Brief Summary Text (48):
Another object of the present invention is to provide such a system and method, in which Web-site-based advertising campaigns can be changed, modified and/or transformed in virtually any way imaginable by simply restructuring the symbolic links between the products and/or services in the campaign using current (i.e. up-to-date) Web-site addresses at which Web-site advertisements and information sources related thereto are located on the Internet.

Drawing Description Text (7):
FIG. 3A2 is a graphical representation of a second illustrative embodiment of the client computer system of the present invention realized in the form of a multi-media kiosk, designed for use as a "virtual sales agent" in retail shopping environments such as department stores, supermarkets, superstores, retail outlets and the like;

Detailed Description Text (20):
The height of this display field 20A need only be a small fraction of the consumer's display screen (e.g. 3/4 inches) to convey this message to the consumers during use of the IPI finding and serving subsystem of the present invention within the retailer's real (or virtual) shopping environment.

Detailed Description Text (28):
As shown in FIG. 3A2, any Client Computer 13 may also be realized in the form of a Web-based multi-media kiosk, designed for use as a "virtual sales agent" within retail shopping environments. As shown, the Web-based kiosk of the present invention comprises: a floor, wall or ceiling supported housing 25; an onmidirectional laser bar code symbol reader (e.g. Metrologic MS 6720 Laser Scanner) 26 for reading UPC (and other type of) symbols printed on products, brochures, documents and the like; an active-matrix LCD-type visual display screen 27 for viewing product related information automatically displayed thereon in response to the entry of the UPC numbers scanned into the UPC Number Entry Window 21D below the IPI Finder button 21A of Control Strip 20B displayed on the Client System, as shown in FIG. 3A2; a touch-screen type keyboard and pointing device 28 for clicking on anchored links on Web pages, entering information into Client System during its use; audio-speakers 29A for supporting a multimedia Web-site that may be visited when using the Client System; a color or black/white printer for printer 29B for printing out Web pages under consumer command during an information finding session using the system; and also, one or more floppy-disc(s) (or otherwise removable) drive units 29C, accessible to the consumer for recording promotional and trial versions of information-based consumer products (e.g. video and audio recordings, computer softeware products, and the like) on removable information storage media (e.g. 1.44 MB floppy discs, 100 MB Zip.RTM. floppy discs, 1 GB Jazz.RTM. floppy discs, etc.) supplied by either the retailer or consumer. Optionally, the kiosk can be provided with a stereoscopic micropolarizing LCD panel from Vrex, Inc. of Elmsford, N.Y. so that micropolarized spatially-multiplexed images (SMIs) of 3-D objects represented with VRML-encoded Web pages can be stereoscopically perceived by consumers when viewed through either an electrically-passive polarizing visor structure supported from the housing of the kiosk, or a

pair of polarizing eyeglasses tethered to the kiosk housing and donned by the consumer. Notably, by virtue of its compact size and low power requirements, this Web-based kiosk can be easily located in supermarkets, department stores, superstores, home-centers, discount retail outlets, or any other public location where consumer-products are being sold, offered for sale, and/or serviced.

Detailed Description Text (35):
Notably, each information item contained with the information field shown along the same horizontal line of FIG. 4A1 is symbolically related or linked. Different products of the same registrants or related registrant may also be linked together so that a user looking for information about a particular product is automatically provided URLs which are assigned to related products of the registrant which may satisfy the goals or objectives of a particular advertising and/or marketing campaign or product promotion program of the registrant company. As it may be desired to relate particular products at particular points in time, the relationships therebetween can be dynamically changed within the IPI Registrant Database by a straightforward database updating operation carried out by a system administrator (or manager) who, in theory, can be located virtually anywhere throughout the world. Expectedly, such database updating operations would be carried out using appropriate system access and security procedures well known in the art.

Detailed Description Text (38):
The list of URLs recordable in the IPI Registrant Database for each registered UPC-labelled product is virtually unlimited. Below are just a few examples of how the IPI finding and serving subsystem hereof can be used as a virtual sales agent that provides value-added services to consumers, retailers and the like.

Detailed Description Text (88):
In general, the WebDox.TM. Server 30 provides a high-volume document processing and mailboxing environment between the WebDox Server and the WebDox Remote.TM. system of each registered manufacturer. WebDoX.TM. Server 30 performs: permanent storage and tracking of all UPC/URL Registration Request documents sent and UPC/URL Registration Response documents received; automatic reconciliation of acknowledgments from WebDox Remote.TM. program; Automatic creation of user-friendly receipt messages to the manufacturer; "mailboxing" of outbound UPC/URL Registration documents for retrieval by manufacturer; and automatic manufacturer and profile creation based on forms received from manufacturers. The WebDox.TM. Server 30 consists of online components that run as extensions to Microsoft's Internet Information Server (IIS) using the ISAPI interface. This provides higher performance and lower hardware requirements than a conventional CGI Web Interface. Processing intensive tasks are performed asynchronously from the Web server. An integrated queuing and dispatching system manages the processing of documents and interaction with the corresponding application. For large volume situations, the WebDox.TM. Server components can be deployed on different machines, the WebDox.TM. Server components (ISAPI extensions) on one machine, the processing components and database on another machine.

Detailed Description Text (92):
WebDox Admin.TM. Computer system 31 provides an easy-to-use tool to manage the community of manufacturers, review the status of documents, and configure the WebDox.TM. Server 30, including: ad hoc maintenance of manufacturer information; online display of the Mailbox permitting inquiry into document status or document activity for particular manufacturers, and the ability to reset document status; creation and maintenance of UPC/URL Registration Profiles; preparation of "releases" of new and updated UPC/URL Registration Applications; Distribution of new and updated UPC/URL Registration Applications; and automatic inventory and tracking of UPC/URL Registration Applications distributed to manufacturers.

WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Sunday, December 28, 2003

Hide?	Set Name	Query	Hit Count
	DB=EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR		
☐	L19	((virtual$ with (agent$ or represent$ or sell$ or market$)) and profil$ and database)	5
	DB=PGPB; THES=ASSIGNEE; PLUR=YES; OP=OR		
☐	L18	L17 and ((agent$ or representative) with (picture or image))	1
☐	L17	L16 and (Internet or online or web or www)	17
☐	L16	L15 and personal$	18
☐	L15	((virtual$ with (agent$ or represent$ or sell$ or market$)) same profil$ same database)	20
☐	L14	L13	0
	DB=EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR		
☐	L13	((virtual$ with (agent$ or represent$ or sell$ or market$)) same profil$ same database)	0
☐	L12	=19991214	0
	DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR		
☐	L11	L9 and (virtual with agent)	1
☐	L10	L9 and profil$ and database and virtual$	1
☐	L9	5950173.pn.	1
☐	L8	6625581.pn.	1
☐	L7	5960411.pn.	1
☐	L6	=19991214	13
☐	L5	"amazon.com" and bezos	14
☐	L4	L3 and personal$	6
☐	L3	=19991214	13
☐	L2	=19991214	13
☐	L1	6029195.pn.	1

END OF SEARCH HISTORY

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First Hit Fwd Refs

Generate Collection | Print

L24: Entry 1 of 3 File: USPT Dec 4, 2001

US-PAT-NO: 6327570
DOCUMENT-IDENTIFIER: US 6327570 B1

TITLE: Personal business service system and method

DATE-ISSUED: December 4, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Stevens; Dian	Hillsborough	NJ	08876	

APPL-NO: 09/ 187728 [PALM]
DATE FILED: November 6, 1998

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/7; 705/10, 705/21
US-CL-CURRENT: 705/7; 705/10, 705/21

FIELD-OF-SEARCH: 705/10, 705/21, 705/91, 705/7, 455/900

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL | Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4746830	May 1988	Holland	310/313D
☐	4882724	November 1989	Vela et al.	364/401
☐	4888709	December 1989	Revesz et al.	364/518
☐	4929819	May 1990	Collins, Jr.	235/383
☐	4973952	November 1990	Malec et al.	340/825.49
☐	5047614	September 1991	Bianco	235/385
☐	5294782	March 1994	Kumar	235/462
☐	5483472	January 1996	Overman	364/705.06
☐	5484991	January 1996	Sherman et al.	235/472
☐	5539395	July 1996	Buss et al.	340/827
☐	5565847	October 1996	Gambino et al.	340/572
☐	5572653	November 1996	DeTemple et al.	395/501

☐	5576951	November 1996	Lockwood	395/227
☐	5608449	March 1997	Swafford, Jr. et al.	348/13
☐	5630068	May 1997	Vela et al.	395/201
☐	5680106	October 1997	Schrott et al.	340/10.33
☐	5732398	March 1998	Tagawa	705/5
☐	5734719	March 1998	Tsevdos et al.	380/5
☐	5734839	March 1998	Enoki et al.	395/220
☐	5768140	June 1998	Swartz et al.	700/225
☐	5812065	September 1998	Schrott et al.	340/10.34
☐	5918211	June 1999	Sloane	705/16
☐	5939981	August 1999	Renney	340/539
☐	5964847	October 1999	Booth, III et al.	710/1
☐	5979757	November 1999	Tracy et al.	235/383
☐	6035350	March 2000	Swamy et al.	710/73
☐	6055573	April 2000	Gardenswartz et al.	709/224
☐	6070147	May 2000	Harms et al.	705/14
☐	6101087	August 2000	Sutton et al.	361/686
☐	6123259	September 2000	Ogasawara	235/380
☐	6129274	October 2000	Suzuki	235/381

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
WO-200062231-A1	October 2000	WO	

OTHER PUBLICATIONS

Snell, Ned. "Bar Codes Break Out." Datamation. Apr. 1, 1992.

ART-UNIT: 216

PRIMARY-EXAMINER: Hafiz; Tariq R.

ASSISTANT-EXAMINER: Norman; Marc

ATTY-AGENT-FIRM: Kraft; Clifford

ABSTRACT:

A system and method of computerizing companies with customized individual addressable electronic direct marketing, self-service automation, and customer care support. The system contains a private network connecting product companies, manufacturers, stores, educational institutions, travel companies, medical providers, financial institutions, and many others to a specified individual customer. The connection is made to a personal agent device carried or worn by a

participating consumer that contains local proce means with an interactive display, security features, optional camera, and wireless communications with the private network. Communications microchips can be placed on products that communicate product information upon interrogation with the personal agent. The invention also includes business professional units in communication with the private network and in-store local wireless communication between personal agents and the business professional unit.

14 Claims, 13 Drawing figures

☐ 9. Document ID: US 6055513 A

L6: Entry 9 of 13 File: USPT Apr 25, 2000

US-PAT-NO: 6055513
DOCUMENT-IDENTIFIER: US 6055513 A
** See image for Certificate of Correction **

TITLE: Methods and apparatus for intelligent selection of goods and services in telephonic and electronic commerce

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw D

☐ 10. Document ID: US 6029141 A

L6: Entry 10 of 13 File: USPT Feb 22, 2000

US-PAT-NO: 6029141
DOCUMENT-IDENTIFIER: US 6029141 A

TITLE: Internet-based customer referral system

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw D

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Terms	Documents
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Search Results - Record(s) 1 through 10 of 13 returned.

1. Document ID: US 6629135 B1
L6: Entry 1 of 13 File: USPT Sep 30, 2003

US-PAT-NO: 6629135
DOCUMENT-IDENTIFIER: US 6629135 B1

TITLE: Affiliate commerce system and method

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

2. Document ID: US 6606608 B1
L6: Entry 2 of 13 File: USPT Aug 12, 2003

US-PAT-NO: 6606608
DOCUMENT-IDENTIFIER: US 6606608 B1

TITLE: Method and system for providing a discount at an auction

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

3. Document ID: US 6606603 B1
L6: Entry 3 of 13 File: USPT Aug 12, 2003

US-PAT-NO: 6606603
DOCUMENT-IDENTIFIER: US 6606603 B1

TITLE: Method and apparatus for ordering items using electronic catalogs

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

4. Document ID: US 6594692 B1
L6: Entry 4 of 13 File: USPT Jul 15, 2003

US-PAT-NO: 6594692
DOCUMENT-IDENTIFIER: US 6594692 B1

h e b b g e e e f e c ef b e

You have received a postcard from my!
You have been sent an electronic greeting card from my.

To retrieve your card, visit the following location:

http://www.1lovecards.com/ecard/pickup.asp?CardSentID=3048688&rID=15372

AOL Card Pick-up Link

Beautiful Love Poems:
http://www.romantic-lyrics.com/lovepoems.shtml

Beautiful Hairstyle Gallery
http://www.free-beauty-tips.com/hairstylegallery.html

Body and Soul Fitness
http://www.wholefitness.com

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 11 through 13 of 13 returned.

☐ 11. Document ID: US 5960411 A

L6: Entry 11 of 13 File: USPT Sep 28, 1999

US-PAT-NO: 5960411
DOCUMENT-IDENTIFIER: US 5960411 A

TITLE: Method and system for placing a purchase order via a communications network

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 12. Document ID: US 5727163 A

L6: Entry 12 of 13 File: USPT Mar 10, 1998

US-PAT-NO: 5727163
DOCUMENT-IDENTIFIER: US 5727163 A

TITLE: Secure method for communicating credit card data when placing an order on a non-secure network

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 13. Document ID: US 5715399 A

L6: Entry 13 of 13 File: USPT Feb 3, 1998

US-PAT-NO: 5715399
DOCUMENT-IDENTIFIER: US 5715399 A
** See image for Certificate of Correction **

TITLE: Secure method and system for communicating a list of credit card numbers over a non-secure network

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents

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L5 and @ad<=19991214	13

Display Format: TI Change Format

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h e b b cg b cc e

L24: Entry 2 of 3 File: USPT May 22, 2001

DOCUMENT-IDENTIFIER: US 6236977 B1
TITLE: Computer implemented marketing system

Detailed Description Text (5):
Referring to FIG. 2, a data flow diagram of a preferred implementation is illustrated. This diagram serves to clarify the concepts outlined in FIG. 1. Each of the user interfaces discussed in the previous section is implemented in the form of a "virtual agent" through object-oriented software. Rather than a set of general menus or functions, each user has a customized personal software agent provided by the system to meet their needs. More specifically the broker interface 36 at a minimum is comprised of a virtual marketing director object 54 and a virtual customer service representative object 63; each serves as the broker's alter ego in communicating with the campaign engine. Likewise, the agent interface 36 is comprised of a virtual personal assistant object 58 that communicates with campaign engine 20 on behalf of the real estate agents. The virtual personal assistant automatically handles many functions currently handled by human assistants hired by real estate agents. The public interface 40 is comprised of a virtual agent object 62 which allows potential or existing customers to manage campaigns in order to obtain a subset of the services provided by actual licensed real estate agents. These virtual worker interfaces allow brokers 26, the public 30 or agents 28 to create and manage campaigns 50 via providing rules, targets and budgets to the campaign process 51. In return, referrals (names of potential customers) are provided to agents. Desired properties, agents or services are returned to the public. Qualified potential agent recruits or customer leads to the broker. In every case this is achieved via a scheduling process 72 and a contacting process 75.

Detailed Description Text (7):
The matching process 64 is coordinated with a scoring process 73 to sort and assess person or property data for the campaigns. The matching process ensures that data received from the user interface via virtual workers can be matched to persons in the person store 68 and/or properties in the property store 70.

Detailed Description Text (8):
There are several types of scores generated for different campaigns by the scoring process 73. An agent eligibility score is used to categorize agents according to recent performance. A listing score and sales score are derived for properties based showing how likely they might be to be listed or sold. Potential customers obtain a contact priority score based on the recency, frequency and cost of contacts to date versus their sales revenue potential. Potential customers are also assigned to a home buying or selling readiness state estimating how likely they might be to buy or sell a house. In all cases scores are derived from user supplied rules for interpreting survey questions or market behaviors. These rules are supplied by the user to particular campaign via the respective virtual worker interface. Scores may also be derived from the prediction engine 22 to generate a predicted score. Currently, this is embodied by the use of holographic neural net technology to enfold patterns of actual data to predict scores based on historical results.

Detailed Description Text (9):

After matching and scoring have been done, the optimization engine 24 is utilized. The optimization engine 24 is currently embodied via an exchange process based on genetic algorithm and game theory techniques described below. In the optimization engine exchange process, a software version of a "free market" is created where any objects in this system (e.g. slots in a call queue, positions in a mailing list, houses for sale, agents, services, etc.) may enter the exchange as either "buyers" or "sellers". The exchange allows the software objects to create bids and make deals in an iterative process that trades-off individual best deals against the aggregate set of deals in order to come as close to the campaign sponsor's goals as possible. Bids are generated based on bidding algorithm rules, targets, and budgets supplied by the user via virtual worker interfaces 62, 63, 54, 58 to the appropriate campaign. The bidding algorithm rules provided by the user essentially weigh the matching process 64 criteria for desires 66, and the relevant scoring process 73 generated scores, in order to create a bid that optimizes the user's goals.

Detailed Description Text (10):
Using the same hotline example as cited previously will illustrate this approach. Members of the public call the broker's hotline. This broker asset is managed by instance of a (inbound hotline) campaign 50 and campaign management process 51 which carries and executes the appropriate rules, targets and budget definitions. The virtual marketing director 54 obtains these rules from the broker 52. The matching process 64 takes each hotline call's detail (caller id, call flow details, properties listened to by the caller, etc.) and matches respective persons in the person store 73, desires in the data store 66 and properties in the property store 70. Having done so, the scoring process 73 generates a contact priority score for each caller, a home buying or selling readiness state score is also calculated based on previously supplied rules. The prediction engine 22 submits to a properly trained holographic neuron the call detail for the caller, and a predicted home buying or selling readiness state score is derived based on historical data. A software object representing this hotline caller now goes to the optimization process 24 exchange as a "seller". It "advertises" its availability on the exchange. Specifically, it advertises that it is available with a certain set of scores. The broker 52 has also created another (outbound telemarketing) campaign 50 to manage the process of calling out to prospective leads from the public 60 to obtain qualified referrals for agents 56. This outbound telemarketing campaign was also set up via the virtual marketing director 54.

Detailed Description Text (11):
The call center can only make so many calls to the public per day. This total constitutes a call queue. The slots in this call queue go to the optimization engine 24 exchange as "buyers". Slots at the top of the call queue (i.e. the calls to be made earliest in the day or by the best customer service representatives) are allocated a larger budget by the campaign sponsor to obtain the most qualified leads. The budget, rules for bidding and any specific targeting goals have already been supplied via the definition of the outbound telemarketing campaign and the virtual marketing director 54.

Detailed Description Text (13):
This capability can provide for a plurality of campaigns for all classes of users. For example, agents 56 can interact with virtual personal assistants 58 to set up customized self-optimizing campaigns for their listings which automatically allow all prospective buyers to compete in the exchange for a chance to be contacted by that agent's campaign. Similarly, members of the public 60 can set up self-optimizing campaigns for marketing their own house which automatically allows all prospective marketing services (classified ads, postcards, telemarketing, use of an agent, etc.) to compete in the exchange for the available budget dollars. A broker 52 can use the system to set up a campaign to obtain the optimum list of agents to recruit to work for the broker. In such a broker recruiting campaign, software objects representing those potential agent recruits from competing brokers would go

the exchange scored by productivity history, mar served, age, credentials, etc. They would compete for the chance for the broker to contact them and be invited to join that broker's firm. In addition, the actual compensation plan for existing and recruited agents can be managed by another broker campaign that optimizes those plans to improve margins by improving productivity.

Detailed Description Text (15):
The computerized marketing system itself is shown at 102. The real estate brokerage hotline computer 104, direct mail fulfillment shop 106, internet web site server computer 116, and customer contact center representative at 118 all serve to allow members of the public 108 to communicate with the computerized marketing system. In the case of the internet web site, this data would be input through the public object 60 of the computerized marketing system via a virtual agent 62 directly connected to the computerized marketing system. In the cases of the contact via the hotline or a direct mail campaign response, data from computers managing these assets is passed to the computerized marketing system via network connections. In the case of contact via live phone call with the customer service representative (CSR) 60, data is entered by the CSR through use of the virtual CSR 63 over a network which constitutes an brokers intranet 110.

Detailed Description Text (16):
Such an Intranet also constitutes the means to connect agents and broker's employees to the computerized marketing system. Agents 114 would interact with virtual personal assistants (virtual PA's) 58 over the Intranet. Marketing directors 112 would interact with virtual marketing directors (virtual MD's) 54 also via this Intranet.

Detailed Description Text (18):
FIG. 4 is a data flow diagram showing how referral data is generated and processed by the software components of the system. The referral generation process involves both inbound and outbound campaigns. In FIG. 4, the components involved primarily in the inbound campaigns are shown generally at 130. Any number of different inbound campaigns can be active at any given time. Thus in FIG. 4 several different inbound campaigns have been illustrated (i.e., hotline, open house, seminar, direct mail, Internet). These assorted inbound campaigns communicate with the inbound campaign component 132 that supplies data to create an aggregated set of contacts 134 from all the inbound campaigns. These contacts use the services of the HNeT holographic neural network prediction engine 22 to generate predicted scores for home buying and selling readiness state to complement the scores calculated via the scoring process 73 as described previously. The optimization engine 24 component spawns a telemarketing exchange process 136 component. It receives scored contacts 134 and analyzes the data to determine which of these optimum contacts would be best handled by mailing list and which would be best handled by direct telephone call. Note that the inbound CSR telemarketing campaign component 142 may also directly supply contact data to component 138. Recall that the inbound CSR process is handled by the virtual CSR 63. The exchange process component 136 thus routes the respective contacts data to the call candidate's component 138 and to the mail list candidate's component 140 based on this determination. It also optimizes the sequence of call candidates for the Outbound CSR TM (telemarketing) Campaign 152 exactly as described previously for the Hotline in the discussion regarding the optimization engine and exchange process. The only difference is that the overall referral generation process described in FIG. 4 combines all inbound campaign leads from all inbound sources into one exchange process allowing all potential leads to compete for call backs or mailings. The mail list candidates may be further optimized using the direct mail exchange process component 142. This component will either cause outbound mail to be sent via outbound mailbox 144, or it will redirect less valuable mailing list candidates to the outbound direct mail campaign component 146 where they will eventually be combined with future contacts to again compete for an opportunity to be assigned to an outbound campaign. In general, the direct mail campaign will be initially structured by rules, target and budget

information supplied through the virtual marketing director agent 54 or through the virtual personal assistant agent 58

Detailed Description Text (20):
The computerized marketing system treats the referral of leads to the real estate agent as an outbound campaign directed, not to members of the public, but to the real estate agents themselves. In FIG. 4 the components primarily responsible for the referral campaign are shown generally at 154. Note that the prediction engine 22 operates upon referrals stored in the referrals component 156 and that multiple feedback loops 158 and 160 are provided to allow the system to be self-tuning. More specifically, call candidates supplied from the outbound CSR telemarketing campaign components 52 are supplied to the referral campaign component 153, which in turn stores referrals in component 156. The referral exchange processing component 162 extracts optimum agent referrals and supplies them to the appropriate agents designated at 164. In the preferred implementation, these sales leads would be supplied as qualified referrals through the virtual personal assistant agent 58.

Detailed Description Text (28):
FIG. 6 illustrates how objects can be hierarchically defined to build the system illustrated in FIGS. 2 and 3. Some of the dynamic behavior of the current embodiment may be seen from FIGS. 7 and 8. FIG. 7 illustrates the referral generation batch process as an event trace diagram. FIG. 8 shows a similar event trace diagram for the inbound CSR telemarketing call processing. In FIGS. 7 and 8 the computerized marketing system is referred to by the acronym CARS (customer acquisition and retention system). In FIGS. 7 and 8 the vertical lines are labeled at the bottom to correspond with different components or objects within the system. Messages are passed between components or objects to effect the referral generation and inbound CSR telemarketing call processes. In general, time flows from top to bottom in these figures. Thus, in FIG. 7 the process begins with the user requesting through a virtual systems administrator interface (SA) that the computerized marketing system (CARS) be started. This request may be relayed through a system department interface to the CARS system, itself. The computerized marketing system (CARS) is preferably configured to initiate a customer acquisition process which in turn triggers a batch referral generation process by sending an appropriate message, designated at 200 in FIG. 7, to the batch referral generation (RG) process.

Detailed Description Text (73):
A campaign activity has a name, start date, end date, budget, currency, and comment. We also indicate if a campaign activity is for indirect purposes, such as to publicize and raise the profile of a realtor, realty firm, or some other market agent role. Campaign activities are also grouped into several types: hot line, direct mail, direct call, web site, advertising, and other. For example, the DirectCall class authorizes phone calls by customer service representatives that lead to PhoneCall events (see Section 8). A campaign activity is targeted at some region. (Section 6 discusses regions.)